



# TEST REPORT

**SINTEF Applied Chemistry  
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Laboratory inspected according to the OECDs principles for good laboratory practice (GLP) and registered in Norwegian Accreditation's GLP-register with registration number G005.

TITLE

Acute Toxicity to *Acartia tonsa* of "SuperAll #38".

CLIENT

CONFIDENTIAL

CLIENT'S REFERENCE

CLIENT'S CONTACT PERSON

CONFIDENTIAL

GLP STUDY

0625.4

DATE

July 29th. 1998

NO. OF PAGES

16

CLASSIFICATION

Confidential

SIGNATURE: STUDY DIRECTOR

RESULT SUMMARY

The LC-values (with 95% confidence interval) for exposure of *Acartia tonsa* to the substance "SuperAll #38" was calculated to be:

LC<sub>10</sub> = 28 mg/L (19 - 37).

LC<sub>50</sub> = 84 mg/L (72 - 96).

LC<sub>90</sub> = 148 mg/L (136 - 160).

QUALITY ASSURANCE STATEMENT

The performance of the test method used in the present study has been inspected by the SINTEF Applied Chemistry Quality Assurance Unit. The dates of the two latest inspections are given below.

The present report has been audited by the Quality Assurance Unit. The report accurately describes the methods and procedures used in the study and accurately reflects the raw data obtained during the study.

DATES OF LATEST INSPECTIONS

24.2.97

16.10.97

INSPECTOR

D. Frøenstad

D. Frøenstad / M. Aursand

Trondheim, 17.8.98

SIGNATURE OF MANAGER:

Hart Aursand

The test results reported in this document were produced by tests of samples received at SINTEF Ecotoxicological Test Laboratory. The results cannot, on the strength of this document alone, be assumed to be valid for other parts of the sampled material. SINTEF accepts no responsibility for any use that is made of the test results.

A copy of this report together with relevant raw data and other supporting documents will be kept in the GLP-files of the Laboratory for a period of at least ten years. Samples of test substances will be kept in safe storage for the same period.

Table 1. Data for immobilisation of copepods in the definitive test after 48 hours exposure to listed concentrations of the test substance "SuperAll #38"

Nominal concentration (mg/L)	Vessel number	Numbers (#) of <i>Acartia tonsa</i> :							
		Initial #		# immobilised after 48 hours					
Control	1 a:b:c:d	5	5	5	6	1	0	0	0
8.1	2 a:b:c:d	5	5	6	6	0	0	0	0
13.4	3 a:b:c:d	6	6	6	5	0	0	1	0
22.5	4 a:b:c:d	5	5	5	5	0	0	0	0
37.2	5 a:b:c:d	5	5	5	5	1	1	0	1
63.7	6 a:b:c:d	5	5	6	5	2	2	3	2
103.7	7 a:b:c:d	6	5	5	5	4	3	4	5
175.0	8 a:b:c:d	5	5	5	5	5	5	5	5
Sensitivity Control	9 a:b:c:d	5	6	6	5	4	4	4	3

Table 2. Calculated LC-values for 48 hours of exposure and related values the test substance "SuperAll #38"  
The values are given as mg/L.

	LC <sub>10</sub>	LC <sub>50</sub>	LC <sub>90</sub>
LC-Value	28	84	148
Standard Error (SE)	5	6	6
95% Conf. Interval	±9	±12	±12

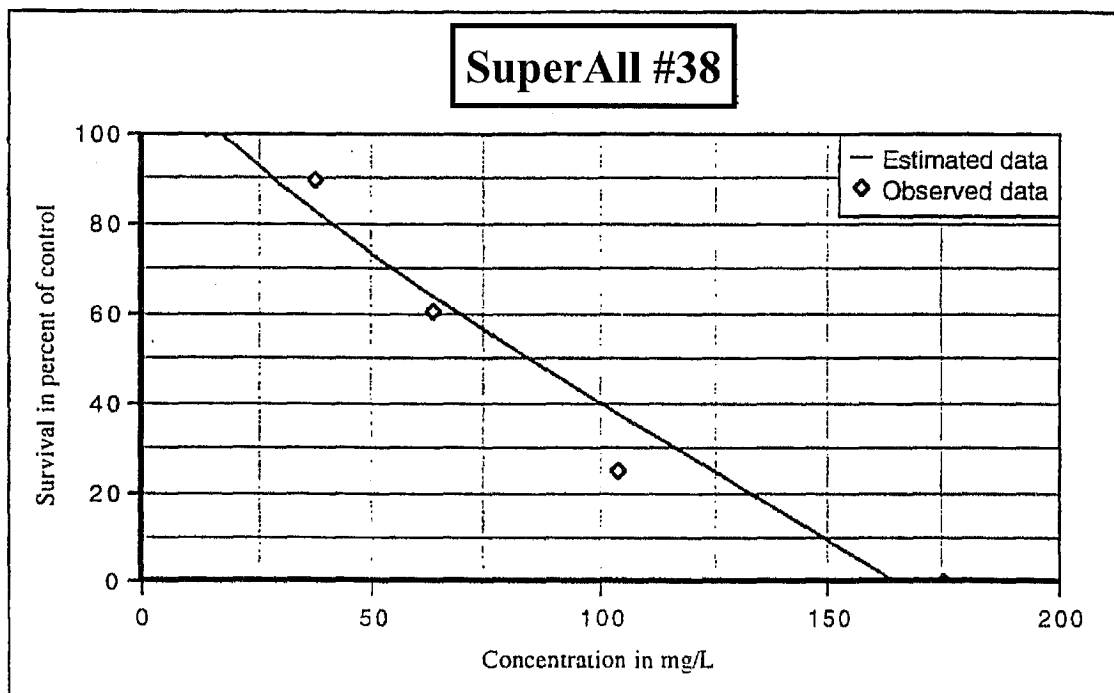


Figure I. Survival (Y) in percentage of control series for *Acartia tonsa* exposed for 48 hours to different concentrations (X) of test substance "SuperAll #38"

**Table 1. Input and basic calculations**

Acartia Series: "SuperAll #38"

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
ID:	625.4															
0	Control	5	5	5	5	1	0	0	0	80	100	100	100	95	100	5.263
1	8.1	5	5	6	6	0	0	0	0	100	100	100	100	100	105.3	0
2	13.4	6	6	6	5	0	0	1	0	100	100	83	100	95.83	100.9	4.386
3	22.5	5	5	5	5	0	0	0	0	100	100	100	100	100	105.3	0
4	37.2	5	5	5	5	1	1	0	1	80	80	100	80	85	89.47	5.263
5	63.7	5	5	6	5	2	2	3	2	60	60	50	60	57.5	60.53	2.632
6	103.7	6	5	5	5	4	3	4	5	33	40	20	0	23.33	24.56	9.283
7	175	5	5	5	5	5	5	5	5	0	0	0	0	0	0	0
8	Sens.	5	6	6	5	4	4	4	3	20	33	33	40	31.67	33.33	
9	NA	5	5	5	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
10	NA	5	5	5	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

**Regression model and curve fitting:**

**Table 2. Data input**

X	logX	Y
8.1	0.9	105
13.4	1.1	101
22.5	1.4	105
37.2	1.6	89
63.7	1.8	61
103.7	2.0	25
175	2.2	0
Sens.	ERR	33
NA	NA	NA
NA	NA	NA

**Regression Output:**

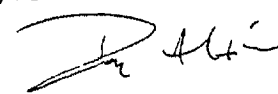
Constant	130	
Std Err of Y Est	.102	
R Squared	0.96	
No. of Observations	7.0	
Degrees of Freedom	4.0	
	a	b
X Coefficient(s)	-0.6	-17
Std Err of Coef.	0.2	22.3

**Table 3. Curve coordinates**

X	Y est	Y
8.1	110	105.3
10.75	107	NA
13.4	104	100.9
17.95	99	NA
22.5	95	105.3
29.85	88	NA
37.2	83	89.47
50.45	73	NA
63.7	64	60.53
83.7	50	NA
103.7	38	24.56
139.4	15	NA
175	-7	0
87.5	48	NA
Sens.	ERR	33.33
NA	NA	NA
NA	NA	NA
NA	NA	NA

**Table 4. Calculation of LC10, 50 & 90 with estimated standard error (SE)**

Iterat.	LC10	LC50	LC90
X1=	28	84	148
X2=	28	84	148
X3=	28	84	148
X4=	28	84	148
X5=	28	84	148
X6=	28	84	148
LC:	28	84	148
SE:	5	6	6
95%:	9	12	12

95.07.29  


**Explanations to Table 1:**

- B: Concentrations of test solutions.
- C..F: Number of Acartia pr. treatment pr. concentration of test solution.
- G..J: Number of immobilized Acartia pr. treatment pr. concentration of test solution.
- K..N: Immobilized Acartia pr. treatment pr. concentration of test solution expressed as percent of total.
- Q: Average of immobilized Acartia pr. concentration of test solution (column K..N).
- P: Average of immobilized Acartia pr. concentration of test solution (column K..N) adjusted for mortality in the control series.
- Q: Standard deviation of observations K..N.